

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA

KIMBERLY ALLEN, Personal
Representative of the Estate of TODD
ALLEN, Individually, on behalf of the
Estate of TODD ALLEN, and on behalf
of the Minor Child, PRESLEY GRACE
ALLEN,

Plaintiff,

vs.

UNITED STATES OF AMERICA,
Defendant.

Case No. 3:04-CV-00131-JKS

Findings of Facts, Conclusions of Law,
Preliminary Decision, and Order

INTRODUCTION

Plaintiff, Kimberly Allen (“KA”), sues the United States on her own behalf and on the behalf of her dependent child for the wrongful death of her husband Todd Allen (“TA”), and as the representative of his estate for his damages in connection with his death. She also sues on her own behalf for negligent infliction of emotional injury. Jurisdiction is pursuant to the Federal Tort Claims Act (“FTCA”), 28 U.S.C. §§ 1346, 2401, and 2671. The United States is deemed to employ the Alaska Native Medical Center (“ANMC”) health care providers whose care, KA contends, was negligent and caused the death of TA. Under the FTCA, the Government’s conduct is measured by

standards governing the conduct of private citizens under the law of the state where the action arose. In this case we look to the law of Alaska to determine the relevant law.

The case was tried to the Court sitting without a jury. Trial began on Monday, June 25, 2007, and ended on Tuesday, July 3, 2007. At the completion of the case the parties were prepared to argue all of the issues pertaining to liability and damages, but the record is voluminous, the liability and causation issues are sharply contested, the Court concluded that it should bifurcate the proceedings and finish hearing argument on liability including causation and, only if liability was found in Plaintiff's favor, reschedule oral argument on issues of damages at a later time. The Court noted that the parties had previously stipulated to economic damages and only the question of TA's general damages and KA's general damages remain. This decision will serve as the Court's initial findings of fact on the issues of negligence and causation.

After a careful review of the record, including a full transcript of the evidence introduced at trial and of the arguments of counsel, the Court has resolved the issues of negligence and causation as follows: The Court finds that Patricia Ambrose was negligent in her triage of Allen and should have assigned him a Level 3 rather than a Level 4 and kept him in the emergency room ("ER") rather than transferring him to the Urgent Care Center ("UCC"). Nurse Ambrose mistakenly viewed TA as a frequent visitor to the ER in search of drugs and on this basis discounted his claim of severe pain. This negligence did not cause Allen and his survivors any harm because on balance it did not effect TA's subsequent evaluation. The Court finds that Donna Fearey was negligent in her diagnosis of Allen for failing to rule out a sub-arachnoid hemorrhage ("SAH") by ordering a CAT scan. While the evidence is in sharp dispute, the Court concludes that Allen did suffer a sentinel bleed at sometime in the early morning hours just before waking KA to take him to the ER where he first presented at ANMC.¹ The Court finds that it is more probable than not that a CAT

¹ The medical experts appear to agree that TA had an aneurism of unknown origin, which at some point ruptured causing the bleeding that ultimately lead to his death. The experts distinguish between a mild warning, or sentinel, bleed, which may not produce all the common symptoms, and a so-called catastrophic bleed that produces unconsciousness and eventual death. They also appear to agree that a sentinel bleed could clot (occlude), diminishing symptoms. Further, they agree that re-

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scan would have uncovered the bleed, triggering a medical response. Since the Court concludes that it is more probable than not that a CAT scan would have disclosed a sentinel bleed, it is not necessary to determine whether a negative CAT scan on this record should have lead to a lumbar puncture.

In this case, causation presents numerous problems that have been thoroughly canvassed by the parties and their witnesses. However, Allen's age, his physical health, and the fact that his SAH would have been caught in its early stages, convinces the Court that it is more probable than not that Allen would have survived to lead a normal life had a CAT scan been performed and the sentinel bleed discovered on the morning of April 19, 2003.² The Court therefore concludes that it is more probable than not that ANP Fearey's failure to prescribe a CAT scan was a substantial factor in causing TA's death.³ The Court will therefore schedule **final argument on issues of damages** for **Thursday, August 30, 2007, at 1:30 p.m.**

DISCUSSION

In order to prove a claim of negligence, a plaintiff must satisfy five elements: (1) duty; (2) breach of duty; (3) actual causation; (4) proximate causation; and, (5) damages. In health professional malpractice cases the duty and the standards for determining a breach of duty are set by statute, AS 9.55.540, which provides:

bleeding is common and can only be avoided by surgical procedures not available in Anchorage in 2003, and which would have required being medivaced to Seattle.

² Defendant correctly points out that viewed statistically, *i.e.*, looking at the total population of men and women who suffer SAH, the prognosis is poor. Nearly half die, and of the remainder, a large percentage suffer serious neurological damage. Those who recover to lead a normal life are probably in the minority; however, statistics tell only part of the story. Statistics inform an estimate, or prediction, about an individual—they do not determine it. The Court will discuss the weight accorded statistical evidence later in this decision.

³Plaintiff also contends that ANMC was negligent in giving KA bad advice over the telephone when she called at 3:45 p.m. the afternoon of April 19, 2004. During oral argument Plaintiff conceded that intervention at that time would probably not have saved TA's life. This Court agrees and concludes that the ANMC nurse who responded to KA's call was negligent, but that her negligence was not a cause of TA's death.

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(a) In a malpractice action based on the negligence or wilful misconduct of a health care provider, the plaintiff has the burden of proving by a preponderance of the evidence

(1) the degree of knowledge or skill possessed or the degree of care ordinarily exercised under the circumstances, at the time of the act complained of, by health care providers in the field or specialty in which the defendant is practicing;

(2) that the defendant either lacked this degree of knowledge or skill or failed to exercise this degree of care; and

(3) that as a proximate result of this lack of knowledge or skill or the failure to exercise this degree of care the plaintiff suffered injuries that would not otherwise have been incurred.

(b) In malpractice actions there is no presumption of negligence on the part of the defendant.

At one time the statute established a “local standard of care,” *Priest v. Lindig*, 583 P.2d 173 (Alaska 1978), though the Alaska Supreme Court concluded that at least for the larger Alaska communities there was no difference between a local standard and a national standard. *Id.* Amendments to the statute have eliminated the local preference in favor of a national standard of care. The statute is specific that in malpractice actions there is no presumption of negligence on the part of a defendant. This was apparently included to eliminate *res ipsa loquitor* as a basis for a finding of health care professional negligence.

The Alaska Supreme Court has concluded that except where negligence would be obvious to a lay person, expert testimony is required to evaluate a practitioner’s performance. *See Parker v. Tomera*, 89 P.3d 761 (Alaska 2004); and *Trombley v. Starr-Wood Cardiac Group*, 3 P.3d 916 (Alaska 2000). The diagnosis, treatment, and prognosis for SAH are not matters within the common experience of lay people; therefore, we must depend upon medical expert testimony to answer the questions posed by this case.

The Defendant has offered substantial evidence in support of the proposition that an appropriate differential diagnosis was unusually difficult in this case. The Defendant argues that for this reason ANP Fearey’s failure to diagnose TA was not negligent. Defendant points out that a substantial number of the men and women who visit emergency rooms complain of severe headache. Of this number, less than 1% have a SAH. ANP Fearey and Nurse Ambrose remembered TA as alert, not sensitive to light, and not complaining of neck pain, which in the

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opinion of the defense experts would tend to rule out a sentinel bleed. To complicate things further, TA had suffered severe injuries in the past that continued to cause him severe pain. His pain was so severe that he had been prescribed narcotics and placed on a pain contract requiring hospital monitoring. Unfortunately, Defendant continues, his recorded complaints to Nurse Ambrose and ANP Fearey mirrored his complaints on earlier occasions regarding pain in his jaw under his ears and the back of his head. Defendant concedes that this time TA complained of nausea and vomiting—signs of SAH—but notes that they are also signs of many other problems. In sum, the defense experts agreed that but for TA's chronic pain from his pedestrian/auto accident, his presentation of severe head pain and nausea should have triggered a CAT scan. Their disagreement with Plaintiff's experts turns on their conclusion that TA's history, coupled with his being relatively symptom-free, masked any bleed that was present. The defense experts point out that expensive tests should not be required every time a patient presents at the ER with a severe headache.

KA argues that TA had not shown up at the ER in years and when he did it was because he was out of narcotics. The night before TA came to ANMC he had just picked up a supply of Oxycotin (Percodan) and Valium and had them available. Defendant responds that ANP Fearey understood TA to say that he had tried to take his medications but had vomited them up. Thus, she discounted his statements of continued pain and prescribed medicine to treat his nausea. She did not provide additional pain medication presumably concluding that once the nausea disappeared he could take, and be relieved by, his existing prescription. Finally, Defendant points out that TA had driven over the mountains the night before, which in the past aggravated his jaw pain, and that after being treated for nausea he went out and had a big breakfast with his wife.

Precisely what TA told Nurse Ambrose and ANP Fearey is in dispute. Both Ambrose and Fearey kept notes of their interviews with TA.⁴ They remember his description of symptoms as

⁴Fearey noted that TA's speech was slow. The experts debated whether this was an advanced sign of SAH. KA testified, however, that as a result of the auto accident TA wore a mouthpiece, which obstructed communication. TA spoke slowly to counteract the effect of the mouthpiece. KA agreed with Fearey that TA was alert, although she pointed out that his long experience with pain made him stoic and less obviously in discomfort.

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identical to his earlier complaints, with the addition of nausea. KA told ER personnel at Providence Hospital later that night that TA told the ANMC practitioners about pain in the back of his head radiating up into the top of his head. Defendant challenges this, pointing to some jottings by TA on a disclosure form furnished him by the hospital, which notes ear pain and, which the weight of the evidence suggests were written by him as he was about to leave the UCC. On balance, the Court is satisfied that TA continued to experience symptoms from his jaw, aggravated by his trip over the mountain during the night and early morning hours, but credits KA's report to the Providence practitioners. The Providence practitioners jotted down KA's remarks as they were being made. KA had no motive to misrepresent at that time, and it is reasonable to infer that Nurses Ambrose and Fearey were so focused on TA's past complaints that they did not hear differences between TA's complaints that morning and earlier complaints that he had presented. In sum, while the issue is close, the Court concludes that under the circumstances TA presented ANP Fearey with sufficient new information that in the exercise of the statutorily prescribed standard of care she should have sought further information to determine whether TA's presenting state was as she assumed (simply a rehash of his prior complaints), or in fact something new. The Court is further persuaded that had ANP Fearey questioned TA further on April 19, 2003, TA would have sufficiently differentiated his complaints from past complaints and ANP Fearey would have prescribed a CAT scan, which the Court is convinced more probably than not would have disclosed a SAH.⁵

Causation is even more of a problem. The Defendant has introduced substantial evidence that the overwhelming number of men and women who experience a SAH either die, or survive in a

⁵ TA obviously thought that there was something different. Despite substantial experience with the severe pain from his previously broken jaw, on this occasion he expressed concern about an ear infection—not simply pain from his jaw beneath his ears. Of course, TA was mistaken and he did not have an ear infection, as Fearey quickly determined. Nevertheless, he did see some difference between his past experience and what he was experiencing that morning. That said, this is a very close case. TA no doubt was satisfied by Fearey's explanation that he was suffering an episode of his customary pain and that phenergan, the anti-nausea medicine she had prescribed, would enable him to benefit from his meds. Some medical testimony points to the placebo effect, which may have calmed TA and, together with the elimination of the nausea, explained his ability to have a large breakfast.

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negative state. Only a small percentage survive to lead a normal life. Compounding the problem for someone diagnosed with a SAH in Alaska is the fact that surgery to correct the bleed must be performed in Seattle necessitating a medivac to that city. Defense witnesses described in detail how time consuming such a procedure would be.⁶ On the other hand, men and women have been medivaced to Seattle for treatment of a SAH with good results.

The Alaska Supreme Court has established a protocol for determining causation in cases where negligence is predicated on failure to perform a test on the assumption that the test if performed would have disclosed an avoidable danger and where absent the test the danger resulted in damage to the plaintiff. *See Maddocks v. Bennett*, 456 P.2d 453 (Alaska 1969).⁷ The court concluded that the plaintiff bears the burden of proving that the test, if given, would have been effective to prevent the loss. The supreme court describes the plaintiff's theory of causation as a counterfactual conditional statement, *i.e.*, conditional in form and counter to fact, citing N.

⁶ Defendant argues that the pain TA experienced in the morning was a recurrence of his customary problems. In the Defendant's view this was a coincidence that preceded a catastrophic bleed in the afternoon, which effectively assured his death. The Court has rejected this argument concluding rather that TA did suffer pain from his jaw in the hours leading up to his waking KA but based upon what it believes is the most reasonable inference from all the evidence that TA did suffer a sentinel bleed minutes before he awakened KA *i.e.* the sudden onset headache discussed in the evidence and it was this which prompted him to seek her assistance in getting to the ER. The Court recognizes that TA never described his head pain in this way. The Court is not inferring a sentinel bleed from a sudden onset headache; the Court is inferring a sudden onset headache from a sentinel bleed and the fact that TA had experienced pain during the night. But, something different must have happened to cause TA to waken KA when he did and not earlier. ANMC ER is open twenty-four hours per day.

⁷ One of the legal issues debated by the parties was whether the Court should shift the burden of proof on causation to the defendant, where the defendant negligently fails to perform a test designed to disclose the existence of a dangerous condition, and the condition arises, and the defense argues that the plaintiff would have suffered the same damages anyway. The Court believes that *Maddocks* addresses this issue and does not permit shifting the burden of proof. The Court views *Maddocks* as definitive on causation in this kind of case.

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Goodman, *Fact, Fiction & Forecast*, 13 (1955). *Id.* at 460, n.1.⁸ In order to answer this question we must recognize at the outset that certainty is impossible. As the *Maddocks* court noted, there is no way to create an algorithm that would enable us to test the effect of a CAT scan on TA. *Maddocks* suggests that we must look to “science,” which in context means scientific research disclosed in the literature. Essentially, *Maddocks* requires us to consider population studies and the statistical probabilities that result from such studies.

At this point, in order to avoid confusion it is necessary to recognize that the term “probability” is ambiguous because it has different meanings in different contexts and those different meanings sometimes overlap. For purposes of this case the three meanings of probability are: (1) mathematical probability; (2) statistical probability; and, (3) subjective probability. These will be discussed in order.⁹ Mathematical probability describes relations between numbers

⁸ In *Maddocks*, the question presented was whether a patch test, if given, would have disclosed the plaintiff’s susceptibility to an allergic reaction to a hair dye. If it would have disclosed the susceptibility, it was assumed that the hair dye would not have been used and no damage would have been suffered. Here there are really two questions: (1) would a CAT scan, if given, have disclosed the bleed, and (2) if it did, could any steps have been taken that would have enabled TA to survive to lead a normal life. The Court is convinced, based upon the whole record, that TA had an early morning bleed, and following *Maddocks*, the Court concludes based upon scientific research that it is highly probable that a CAT scan would have disclosed the bleed and led to treatment. The difficult question not present in *Maddocks*, is whether any available course of treatment would have been efficacious.

⁹ On the possible confusion between subjective probability judgments and statements of statistical probability see A. J. Ayer, *Probability and Evidence* 27–53 (Columbia University Press 1972) (discussing mathematical or a priori probability and statistical probability), and pp.54–88 (discussing what Ayer refers to as credibility judgments and their confirmation, and what I refer to as subjective probability determinations). See also Frank H. Knight, *Risk, Uncertainty and Profit* 197–232 (Beard Books 2002) (discussing the same problems using slightly different terminology). Both Ayer and Knight refer to what I call mathematical probability as *a priori* probabilities to emphasize that they are derived *a priori* from agreed premises, and not through empirical investigations in the real world.

It is also useful to consider the discussions of statistics and related fields in The Federal Judicial Center’s *Reference Manual on Scientific Evidence* 383, n.136 (2d ed. 2000) (discussion of general and specific causation on Epidemiology).

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according to predetermined definitions. Mathematical statements are essentially true by definition. Thus, when someone posits a fair die (defined as a six-sided figure with a number on each face under which when thrown each number has an equal chance of coming up) and then calculates the “probability” that one of the numbers will come up, she is not talking about events in the real world, she is talking about results derived from the relations assumed. The minute she stops talking about a hypothetical die or dice and proceeds to throw real dice and record the results, she is passing from the realm of mathematical probability to the realm of statistical probability. A statistical probability may be expressed as a frequency or a ratio. Thus, again using throwing dice as our example, if the student throws a die sixty times and six comes up five times, the ratio would be five divided by sixty or $5/60$ or $1/12$. Viewed as a frequency you would say that the 6 came up 5 times in sixty throws.¹⁰ The third category is what has been termed subjective probabilities. Here we deal with a prediction, or estimate, by a lay person or expert about the future of a specific individual. Such a prediction, as the *Maddocks* court notes, can never depend on an algorithm. They are not in any sense quantifiable. Essentially, the predictor relies upon his or her background, education, and experience to make an educated guess.

A subjective probability determination differs from a statistical probability in that the latter refers to a population, never an individual member of the population, while subjective probabilities refer to predictions about specific individuals. Thus, when a juror (or judge) finds something to be more true than not true based upon the preponderance of the evidence, she is making an estimate, or prediction, based upon her own evaluation of a subjective probability not making a judgment about a statistical probability.

By the same token, when a health professional testifies to reasonable medical probability (certainty), the speaker is expressing a subjective probability. The problem of making subjective probability determinations about individuals arises when, as in *Maddocks*, it is recognized that there

¹⁰ In this example the statistical probability of throwing a six derived from her population of sixty observations would be $1/12$ while the mathematical probability would remain $1/6$. One would assume that as she continued to throw the die eventually the statistical probability would approach the mathematical probability, but you could never be sure that it would ever equal it.

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is no basis for making a safe prediction about what would have happened to a specific individual in the future and we must ultimately make a judgment, but our judgment should be guided by the best available evidence, which may be recourse to scientific studies whose results are expressed in statistical terms. Since we do not know what would have happened to a specific individual had he had a CAT scan that may have disclosed a SAH, we must look to the population of those individuals whose SAH was discovered and see what happened to them. In essence, statistical statements must be used to inform, though never substitute for, subjective probability determinations.

Once all of the literature has been canvassed and the experts are reasonably satisfied that they know what happened to the members of the population of SAH sufferers who were early-diagnosed, then they can factor that information into their opinions and opine based upon their background, education, and experience what they believe would have happened to TA. We must bear in mind, however, that statistical statements are statements about populations not about individual members of population, and so we must rely on experts to apply statistical knowledge to specific fact situations.¹¹ If you wish to make a prediction about a specific individual and you can discover a population that shares all of his material characteristics and you can rule out all confounding factors and variables such that in all material aspects the average member of the population was identical to the subject whose future you wished to predict, then it is true that you would have a close approximation of what would probably (viewed as a subjective probability) have happened to your subject. But finding such a population to study is rare. The truth is, few populations of people are truly homogeneous. Thus, the average member of a population studied

¹¹ In fact, statistical statements are only indirectly statements about populations. Most populations about which students are interested are quite large. It would be too expensive and take too long to study whole populations. Statistical statements usually are based upon samples drawn from a population. The value of the statement turns on how representative the members of the sample are of the members of the population. Statistics books speak of random samples where each member of the population has an equal opportunity to be included in the sample, but in the real world this is too time consuming and expensive. Thus, we must depend upon researchers to use other techniques to assure that their samples are representative.

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will always differ in some important particulars from the subject of your concern. The role of expert testimony is to translate what we know about the population into a meaningful estimate about the subject of our concern.

Keeping in mind the distinction between statistical probability and subjective probability we can then define risk as the probability of a bad result as contrasted with the probability of a good result. Risk in terms of the statistical probability is simply the frequency in which the bad result occurs in the studied population. The number could also be expressed as a ratio. Those observations in which the bad result occurred could be placed in the numerator of a fraction and the total number of observations (the total population of observances) could be placed in the denominator of the fraction. Risk in terms of subjective probability (personal risk), on the other hand, requires an exercise of judgment drawing on the expert's background, education, and experience informed, but not determined, by statistical evidence. Ultimately, it requires an estimate by the trier of fact, judge or jury, based on the trier's background, education, and experience informed, but not determined, by the expert testimony.¹²

In sum, this Court views *Maddocks v. Bennett* as providing a framework for a decision in this case. This Court interprets *Maddocks* as providing that in cases such as this where a plaintiff alleges that a test, if performed, would have uncovered a danger and triggered a course of treatment, which would have eliminated or significantly reduced the danger, the court must look to expert testimony informed by scientific research to aid it in making what is essentially a subjective probability determination. In order to understand this process we must bear in mind the distinction between subjective and statistical probability. Professor Ayer discusses the problem in the following way:

¹² The risk viewed as a statistical probability will differ from population to population studied. The risk viewed as a statistical probability will always differ from the risk viewed as a subjective probability involving a single individual. Of course, if we could identify a homogeneous population in which each member was in all material aspects identical to the single individual about whom was sought to determine a risk based upon subjective probability, then the statistical risk and the personal risk would converge. It would be exceedingly rare to find a homogeneous population from which to draw risk determinations in a medical malpractice case like this one.

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[S]uppose that we ask what is the probability that Petersen, a Swede is a Protestant. Well, 95% of Swedes let us say, are Protestants, so the odds are 19 to 1 on. But Petersen made a pilgrimage to Lourdes last year and 95%, let us say, of those who make pilgrimages to Lourdes are Roman Catholics so the odds are at least 19 to 1 against. This is a flat contradiction, if we construe our original question as a question about Petersen's chances. It is not a contradiction, however if we interpret the question in the only way it can be interpreted if we are identifying probability with relative frequency [that is, statistically] For then our answer is just a restatement of the fact that Petersen is a Swede who has made a pilgrimage to Lourdes and that 95% of Swedes are Protestants and 95 per cent of such pilgrims are Roman Catholic. There is no contradiction here, but equally the question which we were trying to ask about Petersen has disappeared.

A.J. Ayer, *Probability and Evidence* 51–52 (Columbia University Press 1972) [matter in brackets supplied].

Professor Ayer then addresses the precise question we must consider: how do you translate statistical information about populations, if at all, into a form that will be helpful in making individual estimates or predictions? He continues:

But very often we do want to raise a question of this sort about an individual case. For instance I may be interested in the statistics of longevity only because I want to know what my chances are of living to be an octogenarian. How shall I then proceed? What shall I take as my class of reference? The rational course would seem to be for me to choose among the many classes to which I belong the narrowest class, that is the class defined by the largest combination of predicates, within which I think the property in which I am interested occurs with an extrapolable frequency: so, in this case, not the class of all human beings throughout recorded history, or even that of contemporary Europeans or Englishmen, but rather that of contemporary Englishmen a certain type of occupation, having such and such a physical constitution, such and such dietetic habits, and so forth. As a rational man, I do not want to neglect any factor that is relevant to my case, and therefore will try to avoid choosing a reference class for which such a factor is not a defining property.¹³

Id. at 52. Ayer cautions, however, that statistical reasoning itself does not help you to refine your population or translate statistical statements into what he calls judgements of credibility. *Id.* at 53.

Plaintiff called Dr. Susan Shott, Ph.D., a statistician, to survey the literature and seek to draw inferences from population studies that would help in making estimates about TA's prospects had a CAT scan revealed an SAH when TA first presented at ANMC. Dr. Shott was not able to find a study of a population having all of TA's relevant characteristics. She did find in general

¹³ Professor Ayer is using the phrase "reference class" to describe the population to which a study or statistical probability refers.

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terms that youthful patients, in otherwise good physical health whose SAH was caught early had a much better than average chance of survival with a good result, but she was not able to quantify that example. The medical experts were in general agreement that patients exhibiting these characteristics had the best chance of a normal recovery. The Defendant's experts felt the prognosis was not good, while Plaintiff's experts were more optimistic. The Court has considered all of this evidence in reaching its ultimate conclusion that it is more probable than not that had a CAT scan been performed the SAH would have been discovered and TA would have received treatment that would have stabilized him until he could be medivaced to Seattle and once there his aneurism surgically repaired. This is a judgment based upon subjective probabilities, not certainties. It is not meant as a statement of statistical probabilities

There are a number of possible objections to this use of *Maddocks* which the Court will now address:

First, *Maddocks* involves an evaluation of causation based upon medical testimony but does not involve a medical malpractice case. Nothing in the statute or the decisions of the Alaska Supreme Court suggests that *Maddocks* does not apply to determinations of causation in medical malpractice cases. The supreme court in that case was careful to advise that it was not utilizing *res ipsa loquitor* to aid it in determining causation.

Second, *Maddocks* could be interpreted as holding that given the uncertainty surrounding subjective probability causation determinations, courts should simply treat a statistical risk as the equivalent of a personal or subjective risk. There is nothing in the case that requires this. The thrust of *Maddocks* and the Alaska Supreme Court's other medical malpractice cases is that statistical evidence informs expert opinion, not that it substitutes for it.¹⁴ There is some hint toward

¹⁴ The process of utilizing statistical evidence in making judgments about individuals may be illustrated by the role of the expert appraiser in determining fair market value in condemnation cases. Initially, the expert conducts empirical research to survey the real estate market to find comparable recent arm's length sales. The resulting group becomes her study population. She then determines the price of her comparable sales and then relates them to the subject property either determining that the subject property is superior or inferior to the comparable and, thus, probably more or less valuable. Her comparison is based upon characteristics which in her experiences

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the proper resolution of this point in the *Maddocks* court's treatment of reasonable medical certainty. The appellant quibbled that the doctor was only willing to speak in terms of probability, not certainty. Implicit in the appellant's argument was the assumption that medical opinions can be quantified in some way and that medical certainty means more than medical probability.

Ultimately, the court treated the two ideas as the same, recognizing that we are talking about the speaker's confidence in his testimony, not something that could be measured mathematically.¹⁵

CONCLUSION

In conclusion, after a thorough review of the evidence this Court is convinced that TA had a SAH before presenting at ANMC, that his SAH should have been suspected, and he should have received a CAT scan, and that had he received a CAT scan his SAH would have been detected, and

enhance or detract from the fair market value. The process here is similar: medical research expressed in terms of statistical risk and opportunity provide comparisons, but we must proceed beyond the comparable to determine how TA compares to the averages of the studied population. If his characteristics are superior to the average person studied, then his subjective probability of a good result is better; if his characteristics are inferior, then his subjective probability of a good result is worse. While the statistical probabilities may be quantified, subjective probabilities cannot.

¹⁵ This Court is of the view that the controversy over the so-called "loss of chance" doctrine really rests on a mistake: the identification of what this Court calls subjective probabilities with statistical probabilities. There is no contradiction in saying that Petersen is a member of the population Swedes, 95% of whom are Protestant and saying that Petersen is a Buddhist. By the same token, there is no contradiction in saying that the statistical risk, *i.e.*, probability of death in a population consisting of all those diagnosed with SAH is over 50%, and saying that TA, a member of that population, has a better than average chance of a full recovery. The first statement is based upon statistical risk, the second on a determination of subjective probability focusing on TA as an individual. For a thoughtful discussion of the "loss of chance" cases see *Crosby v. United States*, 48 F.Supp. 2d 924 (D. Alaska 1999). In *Crosby*, the court predicted that the Alaska Supreme Court would not adopt the loss of chance doctrine. The court did not cite *Maddocks*, but *Maddocks* supports its conclusion. The *Crosby* court also pointed out that even without the loss of chance doctrine the plaintiff could prevail. This conclusion is also supported by *Maddocks* as it is interpreted in this case. The fact that statistically those who suffer from a particular disease have a less than 50% statistical opportunity of survival tells us little about whether a particular individual has a good chance of survival. Just as the fact that the average house in a subdivision has a fair market value of "x" does not preclude a finding that a specific house has a greater or lesser fair market value.

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had it been detected the Court is convinced TA would have immediately received treatment ultimately resulting in a successful medivac to Seattle. The Court has reached this conclusion after a careful consideration of all of the medical testimony and a careful review of the statistical evidence presented by the parties. The Court makes no effort to quantify what is essentially a subjective probability determination. Suffice to say, the Court is convinced that TA's age, his relative health, and the opportunity to discover his SAH before significant symptoms developed, gave him a much better than statistically average opportunity for a good result.

Dated at Anchorage, Alaska, this 28th day of August 2007.

/s/ James K. Singleton, Jr

JAMES K. SINGLETON, JR.
United States District Judge

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